

11. (Reiterated) A recombinant expression or replicating vector comprising the isolated or recombinant polynucleotide of Claim 9.
12. (Reiterated) A kit comprising
- a) the isolated or recombinant polynucleotide of Claim 9; and
 - b) instructions for use or disposal of reagents in said kit.
17. (Reiterated) A method of producing a polypeptide, comprising expressing the recombinant expression or replication vector of Claim 11 in a host cell and isolating said polypeptide, thereby producing said polypeptide.
18. (Reiterated) A cell comprising the recombinant expression or replication vector of Claim 11.
19. (Reiterated) A recombinant or isolated polynucleotide of Claim 9, that encodes at least 15 contiguous amino acid residues of SEQ ID NO: 4.
20. (Thrice Amended) The isolated or recombinant polynucleotide of Claim [1]⁹9, that encodes at least 17 contiguous amino acid residues of SEQ ID NO: 4 [wherein said¹ contiguous amino residues number at least 17].
23. (Reiterated) The isolated or recombinant polynucleotide of Claim 9, wherein said hybridization occurs over the entire open reading frame of SEQ ID NO: 1.
24. (Reiterated) The isolated or recombinant polynucleotide of Claim 9, wherein said polynucleotide is a variant due to the degeneracy of the genetic code.

25. (Twice Amended) The isolated or recombinant polynucleotide of Claim 9, wherein said [wash] hybridization conditions are

- a) at least 60° C;
- b) less than 150 mM salt; or
- c) both a) and b).

26. (Twice Amended) A method of producing a polynucleotide duplex comprising contacting the isolated or recombinant polynucleotide of Claim 9 with a second polynucleotide for a time sufficient to produce said duplex under stringent [wash] hybridization conditions of at least 60° C and less than 250 mM salt; thereby forming said duplex.

28. (Reiterated) The isolated or recombinant polynucleotide of Claim 19, which comprises:

- a) at least 57 contiguous nucleotides from the mature protein coding portion of SEQ ID NO: 1 or 3 that lacks an N terminal leader sequence; or
- b) is a variant due to the degeneracy of the genetic code.

29. (Reiterated) The isolated or recombinant polynucleotide of Claim 28, wherein:

- a) said contiguous nucleotides are from nucleotides 26-165 or nucleotides 191-241 of SEQ ID NO: 4.

30. (Twice Amended) An isolated or recombinant polynucleotide encoding a polypeptide that:

- a) has a conservative amino acid substitution of a mature polypeptide of SEQ ID NO: 2 or 4 that lacks an N terminal leader sequence;
- [b) is a natural allelic variant of the mature native polypeptide of SEQ ID NO: 2 or 4 that lacks an N terminal leader sequence; or
- c) is a species variant of the mature native polypeptide of SEQ ID NO: 2 or 4 that lacks an N terminal leader sequence].

✓ 31. (Twice Amended) The isolated or recombinant polynucleotide of Claim 30, ^{comprising} ~~which is~~
~~from~~ SEQ ID NO: 3 [4].

32. (Reiterated) The isolated or recombinant polynucleotide of Claim 30, comprising:

- a) nucleotides 124 to 751 of SEQ ID NO: 1; or
- b) nucleotides 54 to 723 of SEQ ID NO: 3.

33. (Twice Amended) A method of producing a polynucleotide duplex comprising contacting the isolated or recombinant polynucleotide of Claim 30 with a second polynucleotide for a time sufficient to produce said duplex under stringent [wash] hybridization conditions of at least 60° C and less than 250 [200] mM salt; thereby forming said duplex.

34. (Reiterated) A recombinant expression or replicating vector comprising the isolated or recombinant polynucleotide of Claim 30.

35. (Reiterated) A cell comprising the recombinant expression or replication vector of Claim 34.

36. (Reiterated) A method of producing an antigenic polypeptide, comprising expressing the recombinant expression or replication vector of Claim 34 in a host cell and isolating said antigenic polypeptide, thereby producing said antigenic polypeptide.

37. (Twice Amended) A recombinant or isolated polynucleotide that hybridizes to the open reading frame of SEQ ID NO: 1 or 3 under stringent hybridization and [wash]

hybridization conditions of at least 55°C, a salt concentration of less than 250 mM, and 50% formamide.

39. (Cancelled) The polynucleotide of Claim 37, further encoding:

- a) less than three conservative amino acid substitution[s] of a mature polypeptide of SEQ ID NO: 2 or 4 that lacks an N terminal leader sequence.

40. (Twice Amended) A recombinant expression or replicating vector comprising:

- a) said polynucleotide of Claim 37; or
- b) ^{a polynucleotide} sequence encoding the mature polypeptide of SEQ ID NO: 4 that lacks an N terminal leader sequence.

41. (Reiterated) A cell comprising the recombinant expression or replication vector of Claim 40.

42. (Reiterated) A method of producing an antigenic polypeptide, comprising expressing the recombinant expression or replication vector of Claim 41 in a host cell and isolating said polypeptide, thereby producing said polypeptide.

43. (Twice Amended) A method of producing a polynucleotide duplex comprising contacting said polynucleotide of Claim 37 with a second polynucleotide for a time sufficient to produce said duplex under stringent [wash] hybridization conditions of at least 60° C and less than 250 mM salt; thereby forming said duplex.

44. (Amended) The polynucleotide of Claim 9, which comprises:

- a) ^a sequence encoding[es] a mature polypeptide of SEQ ID NO: 2 or 4, that lacks an N terminal leader sequence; or

b) [~~comprises~~ ^a sequence encoding an extracellular domain of SEQ ID NO: 2 or 4.

45. (Amended) The polynucleotide of Claim 9, which:

a) comprises ^a sequence encoding a mature polypeptide coding portion of
SEQ ID NO: 1 or 3, that does not encode an N terminal leader sequence;

^b c) comprises ^a sequence encoding a intracellular domain of SEQ ID NO: 2 or 4.

46. (Reiterated) The isolated or recombinant polynucleotide of Claim 9, which is:

a) is attached to a solid substrate; or

b) is detectably labeled.

47. (Canceled) The isolated or recombinant polynucleotide of Claim 9, which is:

a) is in a sterile composition;

b) encodes an antigenic polypeptide having at least 12 amino acid residues; or

c) is synthetically produced.

48. (Reiterated) The isolated or recombinant polynucleotide of Claim 47, wherein said
contiguous amino acid residues number at least 21. *Cancel* *cancel*

49. (Amended) The polynucleotide of Claim 37:

a) wherein said [wash] hybridization conditions are at least 70°C; or

b) comprises at least 36 contiguous nucleotides of the mature coding portion of SEQ ID
NO: 1 or 3 that does not encode an N terminal leader sequence.

50. (Amended) The polynucleotide of Claim 37 comprising:

~~a) [that comprises] sequence [encodes] encoding [an antigenic polypeptide]~~ or *NO*

^b ~~b) [comprises] sequence encoding~~ at least 20 contiguous amino acids of the mature
coding of SEQ ID NO: 4 that lacks an N terminal leader sequence.